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UNITED STATES
DEPARTMENT OF AGRICULTURE

DEPARTMENT CIRCULAR 351

Washington, D. C. August, 1925

CENTRALIZED MANAGEMENT OF A LARGE CORPORATE ESTATE OPERATED BY TENANTS IN THE WHEAT BELT

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The relative advantage of large-scale, as compared with small-scale farming is one of the questions in agricultural economics which has received much attention in various countries of the world. For many years English economists were inclined to emphasize the advantages of large-scale farming whereas economists of continental Europe stoutly maintained the advantages of small-scale, or peasant, farming. In spite of the long-continued debate the question is still unsettled. There is a tendency at present for English economists to be much less confident than formerly of the advantages of large-scale farming, and in many of the countries of continental Europe an intense controversy rages over the relative advantages of the two contrasting systems of farm economy.

In the United States the tendency is to favor neither extreme but to advocate the commercial "family farm" of intermediate size. However, over much of the South large plantations have persisted, and in other parts of the United States occasional instances of successful operation of farms on a large scale are to be found.

The very fact that the controversy has never been settled signifies that neither of the extremes is absolutely desirable nor undesirable, but that each may be justified by special conditions.

As a result of the recent depression many persons in the Northwest find themselves the owners of large areas of farming land

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which they have been unable to dispose of, or which they were compelled to take back through the inability of the operators to meet their obligations. These owners are forced to consider what policy they will adopt with respect to these holdings at a time when it is difficult to dispose of land by sale. The experience and policies of the Amenia and Sharon Land Co., a large corporate estate, located in the Lake Agassiz basin, now the Red River Valley, in eastern North Dakota,[1] are worthy of careful consideration by persons thus circumstanced. In fact, the Amenia and Sharon Land Co. adopted the main outlines of its present policy in 1892, a time when conditions were not dissimilar to the agricultural depression beginning in 1920.

This bulletin describes the development and system of management of that company.

In certain respects this estate is unique and therefore justifies special consideration. It developed the policy of working the land by tenants at a time when land in that section of the country was cheap and easily acquired, and consequently when tenant farming was not prevalent. The large "bonanza" farms operated by hired labor, which so largely prevailed in the Red River Valley, have tended to be displaced by smaller farms; but the Amenia and Sharon estate has continued with little essential change either in size or in policy. For the most part, the system of management has been successful and has proved satisfactory to the tenants as well as to the owners. The detailed policies employed have been worked out gradually as a result of experience through several decades.

EARLY HISTORY OF THE AMENIA AND SHARON LAND CO.

The towns of Amenia, N. Y., and Sharon, Conn., are located but a few miles apart, about 90 miles north of New York City. Just after the Civil War a number of farmers, business men, and professional men in these localities had invested considerable money in the bonds of the Northern Pacific Railway Co. The failure of the company left the bondholders only the alternative of taking advantage of the provision in their bonds, which permitted them to be exchanged for the railway grant lands donated to the company by Congress. Accordingly, in July, 1875, a number of families in the neighborhood of Amenia and Sharon formed a corporation with a capital of about $100,000, which was exchanged for the bonds of the holders. In the same month a representative was sent to the Red River Valley and there located odd-numbered sections of land in four townships of Cass County, N. Dak., now known respectively as Amenia, Walburg, Wheatland, and Gill. The average nominal purchase price was about $3.75 per acre, that is, in par value of railway bonds exchanged for the land.

[1] In 1919 a very detailed study of this estate was greatly facilitated by the generous assistance rendered by Walter R. Reed, of Amenia, N. Dak., for many years president of the Amenia and Sharon Land Co., and his associates. Some of the data have been published, as follows: Farm Tenants and Owners on a Corporate Estate, by Walter H. Baumgartel and Charles L. Stewart, a preliminary report issued in June, 1924. Details mainly with regard to the system of tenant contracts were included in Cash and Share Renting of Farms, by Alva H. Benton, Bulletin 171, Agricultural Experiment Station of North Dakota, pp. 37–51. The financial experience of the corporation was analyzed in Some Economic Aspects of Farm Ownership in Three Decades, by Charles L. Stewart, U. S. Dept. of Agr., Bul. 1322, 1925.

See also A Tenant System that Pays, by George Dacy, in Country Gentleman, March 14, 1914.

The charter of the corporation provided for broad powers, including sale of the land holdings, mining, and farming: but there are indications that the initial purpose was to sell the land as soon as practicable. The land market in the region was not very active, and it was soon resolved to try to get some of the land broken up and put into crops. Accordingly, E. W. Chaffee, who had been engaged in locating the holdings of the corporation, and who was a farmer of long experience, was designated as active manager of the property.

In the spring of 1876 the manager went out to North Dakota with a crew of men, bought horses and equipment, and broke a section of land which was sown to wheat the following spring. During the next three years considerable money was spent by the corporation in breaking and planting additional land, constructing buildings, and increasing equipment. It soon became apparent that the soil, formed in the bottom and on the margins of an ancient glacial lake, was of extraordinary fertility. This fact and the rapid settlement of the surrounding region, with the resulting increase in the value of the land, deterred the corporation from carrying out the original purpose of quickly disposing of its holdings. During the next few years, from 1879 to 1887, a number of sections were sold, mainly on credit, but some of the purchasers were unable to meet their payments and their land reverted to the company.

Gradually a division of opinion developed in the corporation. Some of the stockholders in the East had little confidence in the future of the business and were anxious to dispose of the holdings of land and wind up the affairs of the company. On the other hand, the resident manager was firmly convinced of the great future of the Red River Valley and of the business of which he was the active head. He acquired additional stock in the corporation and at the time of his death, in 1892, he owned more than half of the outstanding stock. He had also acquired considerable land in his own name and established a general store in the vicinity of Amenia. In 1886 he moved his family from Connecticut to North Dakota. His son-in-law and his grandsons, who have since been associated in the enterprise, came with him.

As a result of the discontent of the eastern minority interests the property was divided in the spring of 1895, nearly two-thirds of the holdings going to the Chaffee interests. After attempting unsuccessfully for a few months to operate or sell their holdings the minority interests finally disposed of all their property in North Dakota to the son of the resident manager, who in 1900 bought several sections of land in the southwestern part of Amenia township and in other towns adjoining, the lands being known as the Wanotan ranch. A new organization was created to take over this land, known as the Wanotan Land Co., organized in April, 1900. Some other property was purchased by this company and in July, 1906, the Wanotan Land Co., and the Chaffee-Miller Land Co., which had succeeded the Red River Valley Land & Investment Co., in 1902, were merged into a new corporation called the Miller-Chaffee-Reed Co. This reorganization was mainly for placing an issue of preferred stock, with the proceeds of which to make additional purchases of land.

In 1911 the Amenia and Sharon Land Co. was organized under the laws of the State of North Dakota and enlarged to include land formerly owned by the estate of E. W. Chaffee and his heirs, and by the son personally. At the close of the year 1911 the reorganized Amenia and Sharon Land Co. owned 28,594 acres of land and the Miller-Chaffee-Reed Co. owned 11,805 acres, a total of 40,399 acres. About half the lands of the Miller-Chaffee-Reed Co. were disposed of; and, in 1917, the preferred stock of that company having been retired, the remainder of the lands were incorporated with those of the Amenia and Sharon Land Co., making a single organization for the entire holdings.

For a number of years the early farming organization of the Amenia and Sharon Land Co. resembled that of other large bonanza farms of the region. The enormous holdings were operated by means of hired laborers. Local laborers were employed only for harvest work. The regular laborers were brought annually from the Amenia and Sharon neighborhoods in New York and Connecticut. In this period a general headquarters farm was maintained, which employed as many as 60 men in busy seasons, and the remainder of the estate was divided into six farm units, each with its buildings and equipment and a force of from 6 to 20 men. The financial administration, the employment policy, and the general farming policy were administered for the estate as a whole, the subdivisions being the units of administration for routine farm operations. Thus, the estate was operated on the same general principle as the other great bonanza farms of that region.

In 1892 the policy of direct wholesale operation was changed to one of subdividing the estate into tenant farms, but under the general supervision of the management. By 1895, only the headquarters farm was operated directly with hired labor; all the rest of the estate had been divided into tenant holdings. This general policy has been retained since that date.

In short, while the other bonanza farms of the region were gradually broken up into smaller farms, the Amenia and Sharon Land Co. adopted an intermediate policy, sharing some of the risks and responsibilities of farm operation with tenants, but retaining the advantages of unified control in general policies and the advantages of large-scale organization in buying and selling, and in financing the business.

PRESENT[2] ORGANIZATION AND POLICIES OF THE COMPANY

LOCATION AND SCOPE OF BUSINESS

The holdings of the Amenia and Sharon Land Co. are in Cass County, N. Dak., from 25 to 35 miles west of Fargo. The bulk of the holdings lie in a nearly compact block of about 36 sections of land, in Amenia Township and adjacent townships, about 4 miles north of the town of Casselton at the nearest point (fig. 1). Within an area of a few miles from this block of holdings are a number of scattered tracts, amounting in all to about four sections. Beginning

[2] The word "present" refers to the time when the field study was made, in 1921. Since that time some changes in general policy have been made, which are hereinafter described.

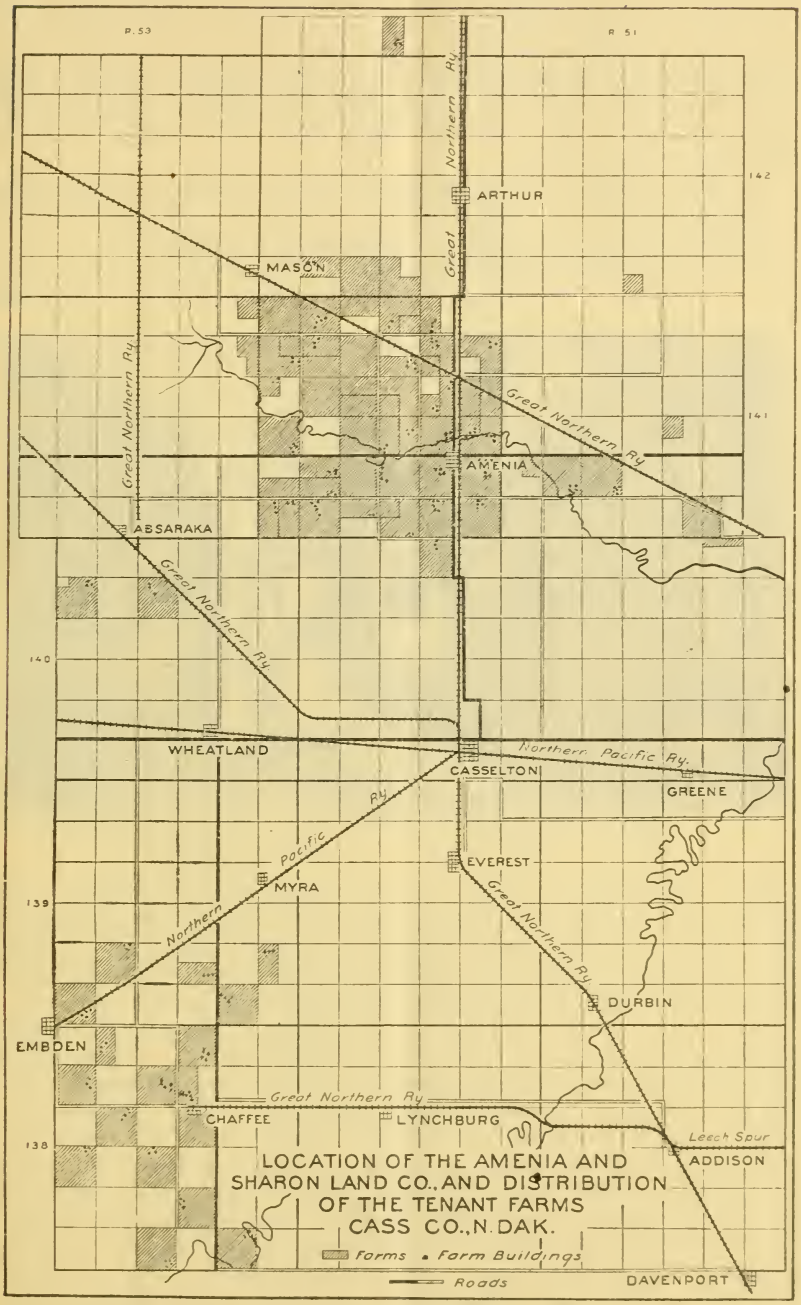

FIG. 1.—The tenant farms of the Amenia and Sharon Land Co. are largely, but not entirely, in two large groups

about 7 miles southwest of Casselton is another group of holdings, somewhat more scattered than the Amenia group and comprising in all about 15 sections of land.

The soils in these holdings were formed by deposits along the shores and in the deeper portions of the glacial Lake Agassiz. They include such series as Miami black clay loam, Miami loam, Marshall loam, and Fargo clay. On the whole they rank among the richest wheat soils in the world.

The administrative headquarters of the business is at the village of Amenia, practically all of which consists of buildings belonging to the company or to its officers and employees (fig. 2).

As shown by Figure 3, the company engages in a number of enterprises which are complementary to its farming activities. The most

FIG. 2.—Home of one of the officials of the company

important of these enterprises is the grain elevator business. The first elevator was built at Amenia in 1881. An annex was built the following year and a larger elevator several years later, making a total capacity at Amenia of 225,000 bushels, which was the largest elevator in the Northwest outside of the terminal houses.

These elevators were burned in December, 1905, and the present elevators were built the following summer (fig. 4). These consist of a working house of 60,000-bushel capacity and a storage annex, with a capacity of 150,000 bushels, the plant being equipped with modern cleaning machinery and now operated by electric power. An elevator for seed wheat was built at Amenia in 1906, and in 1907 a larger elevator was built for other kinds of seed grain. At Chaffee, the company's elevator (fig. 5) has a capacity of 50,000 bushels. It was built in 1893 when the Great Northern Railway Co. extended its branch line to that town. A smaller elevator for seed wheat was built there a few years afterward. In 1905, an elevator of about 30,000-bushel capacity was built on section 5 in the northwestern part of Amenia Township to enable the farmers in that vicinity to store

their grain until they had time to haul it to the elevator at Amenia. When the Fargo-Surrey line of the Great Northern was built, a station named Mason was located about 3 miles northwest of this elevator and the elevator was moved to this station and in 1915 was enlarged by the addition of an annex, making a total storage capacity

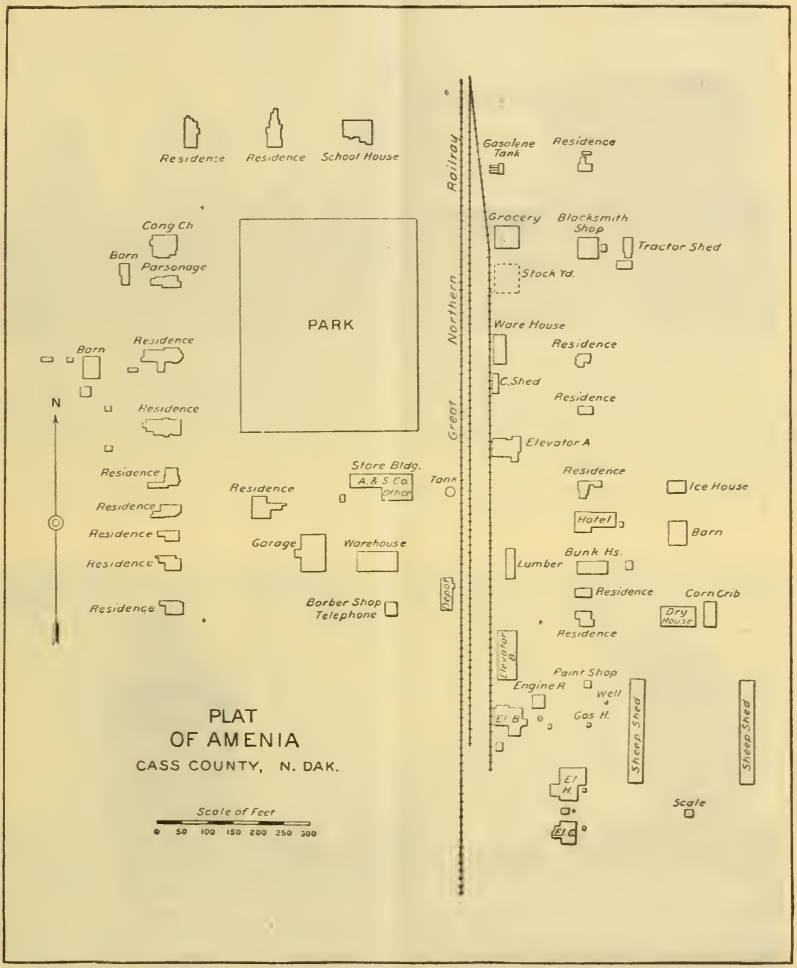

FIG. 3.—The plan of Amenia, Cass County, N. Dak., offers an interesting study

of about 40,000 bushels. In 1914, a station was located on the Fargo-Surrey line, about 7 miles southeast of Amenia called Newman, and the company built an elevator there that year. The latest addition to the company's elevator property is one at Absaraka, built in 1918, with a capacity of about 45,000 bushels. All of these elevators are operated as public warehouses and are patronized by other farmers as well as by the company's tenants.

The necessity of cleaning and storing seed for its farms was early recognized by the company. In 1907 a regular seed department was organized, and since that time grain and seed corn grown by the company on its farms have been handled and sold commercially.

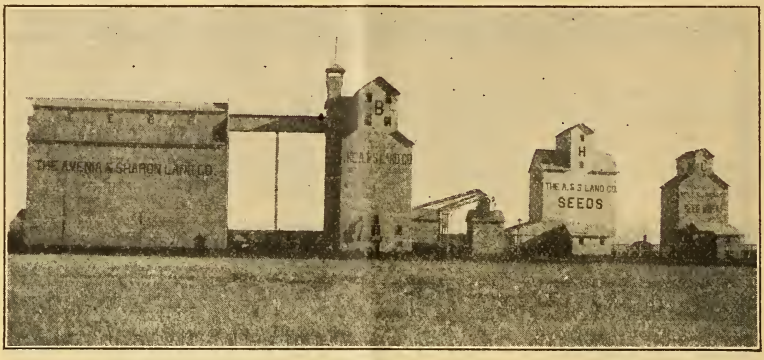

FIG. 4.—Group of elevators and seed houses at Amenia

Two elevators at Amenia and one at Chaffee are used exclusively by this department, and an efficient seed corn drying plant (fig. 6) has been built at Amenia.

Feed mills are operated in connection with the company's elevators at Amenia, Chaffee, and Absaraka.

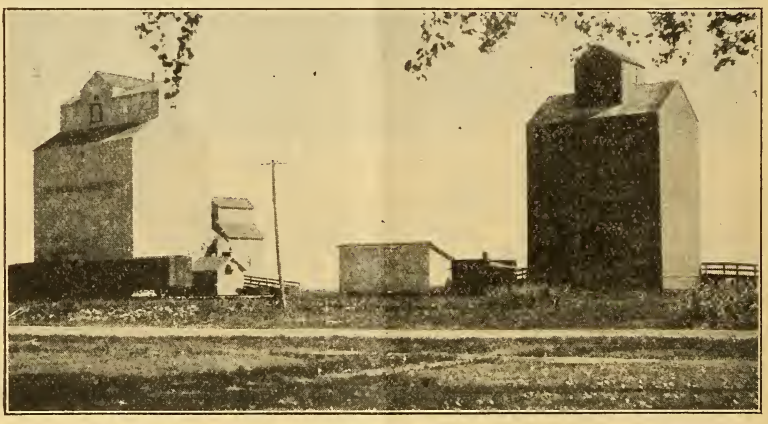

FIG. 5.—Elevators and seed houses at Chaffee

From carrying lumber, builders' hardware, and supplies for its own use, the company has come to carry such materials for sale, and has well-equipped yards and warehouses at Amenia and Absaraka.

A large garage (fig. 7) is operated at Amenia. The company maintains seven automobiles, three trucks (one is used for the transportation of school children to the consolidated school at Amenia), one motor chemical fire engine, and five tractors.

An electric generating plant (fig. 8), with capacity for the operation of the elevators as well as for light and power for the village of Amenia is the latest addition to the company's industries.

FIG. 6.—Corn drier. Seed department of the Amenia and Sharon Land Co.

FIG. 7.—Company carpenters are employed in the winter. Improving garage

The company owns 14 dwellings at Amenia and 3 at Chaffee, all of which are occupied by employees. It owns a store and office building, a hotel at Amenia, several smaller warehouses, and other

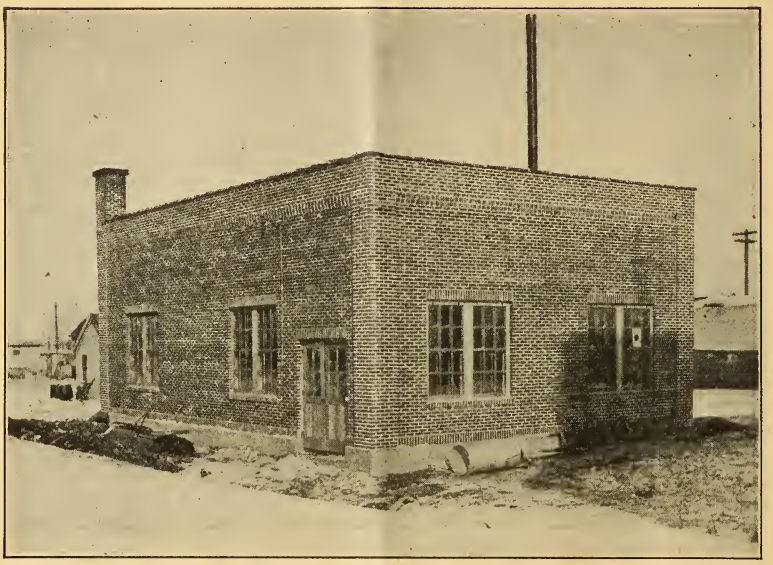

FIG. 8.—New electric plant. Oil engine generates electricity

FIG. 9.—Group of company buildings: Telephone building, warehouse, office of the company, and garage

buildings. The store is leased and operated by other parties and the hotel was originally handled in the same way, but for several years has been operated by the company direct. It is equipped with a large dormitory for unmarried employees.

FIG. 10.—General stables of the company

FIG. 11.—Sheep sheds at Amenia

The company still operates a headquarters farm, amounting at present to about two sections of land. This farm is largely employed for experimental purposes, especially for growing improved varieties of seed grain.

GENERAL ORGANIZATION

As shown in the accompanying chart (fig. 12), the organization of the company comprises eight coordinate departments, each having subdivisions. Although in organization each department is separate and distinct, in a number of cases the same man is in charge of more than one department. In fact, the company is largely a family corporation, and for the most part the principal officials and heads of departments are relatives of E. W. Chaffee, the original resident manager.

SIZE OF TENANT FARMS

The approximately 55 square miles of land owned by the company is subdivided into 65 tenant holdings, in addition to the area occupied by headquarter's buildings and experimental farm. In the earlier years of operation by tenants, scarcity of buildings compelled the company to lease comparatively large tracts of land. Gradually, as additional buildings have been constructed, the size of tenant holdings has been reduced. At present, the average is about 500 acres per farm, and only two or three tracts in the company's holdings are not equipped with buildings. The range in size of tenant farms is as follows:

Range in size of tenant farms

Size	Number of farms	Size	Number of farms
1½ sections	1	¾ section	13
1¼ sections	4	½ section	14
1 section	28	¼ section	4
¾ section	1		

It has been the policy of the company to provide their tenants with fairly large farms to promote the economies of large-scale operation, particularly the use of large teams, and to make possible comparatively large profits for the tenant. But the tenants vary considerably in ability, experience, and amount of available operating capital and family labor; consequently, the necessary elasticity in adjustment requires considerable variability in the sizes of the various tenant holdings.

IMPROVEMENTS ON TENANT FARMS

One of the fundamental policies of the company has been to provide comfortable homes for tenants. All but eight of the dwelling houses contain six or more rooms and nearly half have seven or more rooms. In general, the houses occupied by the company's tenants are as commodious as those of the majority of farm-owner operators of the vicinity. Nearly all of the houses are screened, and all but two have cellars. About a fourth of the dwellings are provided with water in the house and about half with sinks. Only one has a bathroom.

Most of the houses were built between 1890 and 1900, but it is the policy of the company to employ its construction department in keeping tenant buildings in good repair.

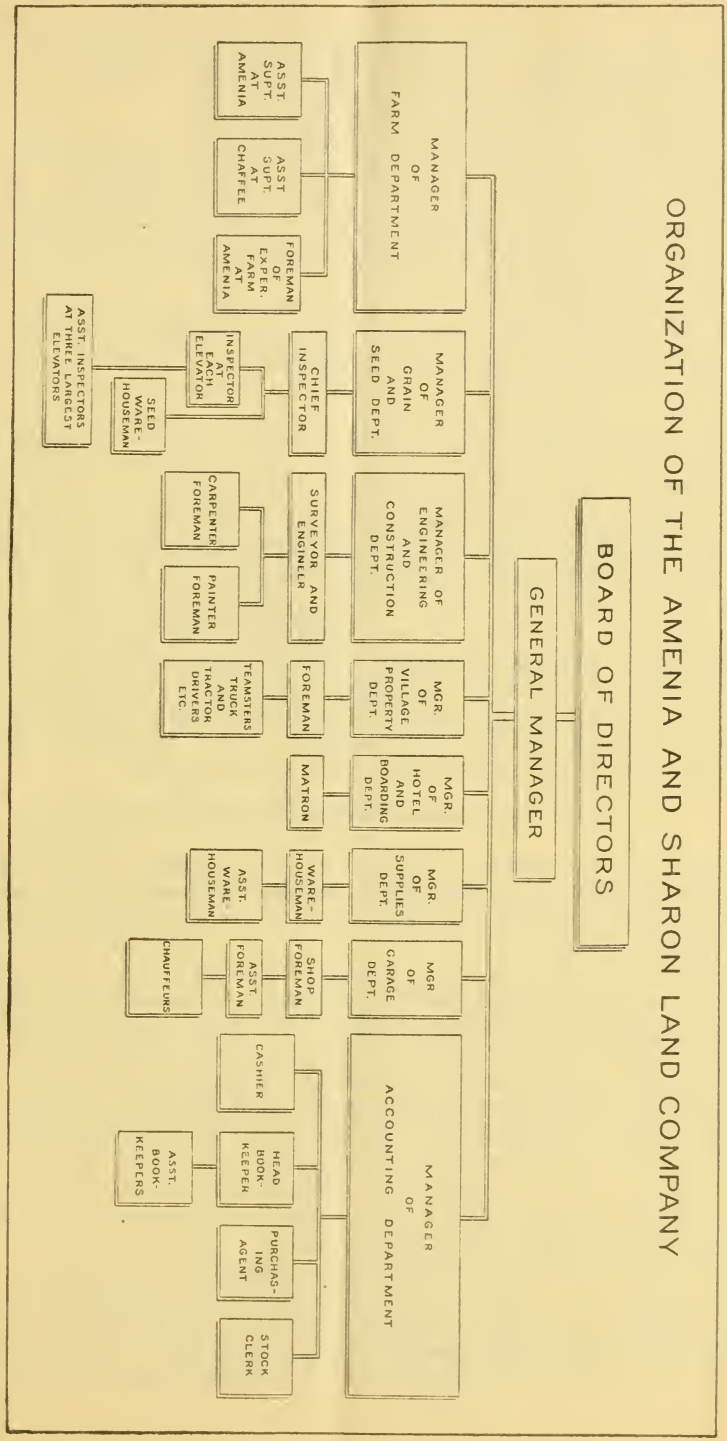

Fig. 12.—Organization of the Amenia and Sharon Land Co.

The farmsteads are provided with ample grounds around the home sites, ranging in size from 2 to 10 acres. The company has set out trees about many of the houses and has encouraged by a system of prizes the maintenance of well-kept premises. In general, the development of the grounds is left to the tenants.

The company is anxious to accommodate its tenants with silos whenever they see it is for the interest of the tenant and the company that the silo be erected. This is usually decided by the tenant's enthusiasm for livestock and his record as a livestock keeper. There are three methods by which silos are erected on the company property, as follows:

(1) The tenant can buy the silo outright and place it on the farm, the company paying for it when the tenant has left the farm on the basis of a 10 per cent depreciation, if depreciation has not been more than normal, for each year the silo has been in service. Thus if a tenant erects a silo and leaves in five years' time, the company pays the tenant the difference between the 50 per cent which the silo is supposed to have depreciated and the cost price.

(2) The company will build a silo, paying for it out of its own capital and requiring the tenant to pay for it at the rate which will insure returns on its interest and capital invested during the lifetime of the silo. The experience of the company has been that the cost of a silo to the tenant under this arrangement is from $30 to $60 a year, depending on the size and kind built and the life of the silo.

(3) The tenant can purchase a silo from the lumberyard in Casselton, and the company will guarantee the account, paying the tenant for the unexhausted value of the improvement when he leaves.

Interest taken in silos, by the company and by the tenants, is shown by more than a score of silos upon the various farms.

ESSENTIAL CHARACTERISTICS OF TENANT POLICY

The standard contract employed by the company and the standard farming specifications are given in the appendix. The principal characteristics of the company's policy in employing tenants are here summarized.

Assuming that he does not want his land to lie idle, the owner of a large corporate estate has four possible alternatives: (1) He may sell his holdings; (2) he may operate the estate under direct supervision by employing laborers; (3) he may let the land to tenants; (4) he may employ some combination of the three policies.

After the withdrawal of the eastern stockholders, a definite policy of continued ownership was decided upon by this company. This decision rested on the faith the resident owners had in the future develoment of the country, the prospects of gains through increase of values—prospects that were justified as time went on—and the current profitableness of farm operation.

By deciding to let their holdings to tenants, the company escaped much of the high cost of supervision and the wastefulness generally connected with operation on a large scale by hired laborers. Such a decision was especially justified by the fact that it was possible to obtain as tenants industrious and intelligent men of considerable

farming experience either with sufficient capital for farm operation or capable of commanding the necessary credit.

The average operating capital of tenants studied was $4,637. One of the tenants employed an operating capital of $25,000, another $18,000, and another $11,500. Three of the tenants had operating capitals under $10,000 but over $7,500; 7 had operating capital over $5,000 but under $7,501. Forty-four out of 57 tenants employed operating capital of less than $5,001, of whom 16 had less than $2,501. In addition, 15 of the tenants were owners of farms ranging in value from $3,000 to $17,600, while 11 others reported having previously owned farms which they had sold.

The capital of the tenants at time of starting was much less than this statement indicates. Of 28 tenants for which initial capital is reported, 15 started with $1,000 or less, 9 with more than $1,000 but less than $3,001, and 4 with capital ranging from $3,001 to $8,000.

In general, the investigator was impressed with the ability and good character of the tenants. They were wide-awake, progressive, intelligent, and independent. For the most part, they looked upon their position as renters as temporary and a stepping-stone to farm ownership. Apparently, the landlord's function of selecting a good class of farm operators had been exercised with intelligence and at the same time the policies employed had made it possible to attract and keep a high class of tenants.

To attract men of considerable capital and farming experience in a country where the ownership of good land could be so easily obtained, especially in the earlier years, it was necessary to provide reasonably attractive business opportunities to the tenants and comfortable living conditions. This was partly responsible for the policy of large tenant holdings; on the other hand, the large size of the several tenant holdings made it necessary to attract men of considerable experience and capital.

To justify the large outlay of capital for farm improvements, for elevators, and other establishments mentioned, it was necessary to provide safeguards against soil depletion. Since the share system of renting was adopted it was to the interest of the company to make provision for expert supervision, to control the selection of seed, to stipulate the field system to be employed, and to determine other details of farming policy. Furthermore, it was found possible to realize the economies possible through purchasing certain requisites of farming and rendering certain services on a large scale. Such were the considerations which determined the policy employed by the company in the organization and operation of its holdings.

DURATION OF LEASE

The aim has been not only to get good tenants, but to keep them. While aiming to promote stable occupancy for tenants, the company has employed an indeterminate lease terminable in any year by either party by giving written notice not less than two months prior to March 1. In the contract the company is given the right to terminate the lease immediately on the neglect or failure of the tenant to commence or carry on the work of seeding at the proper time of

year. The owner may change at will the farming specifications, which are made a part of the contract, by giving written notice of such changes on or before December 15, such changes to become effective on the 1st day of the following March.

USE AND MAINTENANCE OF REAL ESTATE

The tenant is given the use of the real estate subject to such limitations as to method of use as are provided for in the farming specifications, made a part of the contract. The company agrees to pay the taxes and fire insurance on buildings and, with certain exceptions, undertakes to bear the expense for repairs, both for materials and for labor.

The tenant agrees to furnish the labor for papering and painting the interior of dwellings and the teams and labor for hauling fencing materials and constructing, changing, or repairing fences. The tenant is required to clear out ditches and do such ordinary ditching as may be necessary to prevent damage to crops. He is made responsible for protecting the property against unnecessary injury and for making repairs for injuries due to his negligence. He is made responsible for keeping noxious weeds cut on the premises and along adjacent roadways and for any tax or assessment legally levied for the cutting or destruction of weeds on the farm or along adjacent highways. To offset these obligations he is entitled to any allowances made by the township for cutting weeds on the highway after deducting any tax payable by the company for clearing weeds from highways adjacent to his farm. The tenant is given the free use of a garden of sufficient size to supply his family, but may cut and use timber only on consent of the owner.

USES OF LAND SUBJECT TO SPECIAL RENTAL CHARGES

The raising of small grain has always been the principal type of farming on these holdings and the system of rental has been on the sharing basis, as described later. As the evolution of farming in the Red River Valley of late years has been in the direction of mixed farming, involving the maintenance of livestock, the production of corn and hay, and the use of considerable areas of pasture, supplementary provisions in the tenant contract have become necessary.

Because of the interest in clean tillage, the raising of corn has been encouraged by renting corn land to the tenant at $2 an acre with a rebate of $1 at the end of the season provided the field is kept clean to the satisfaction of the superintendent of farming operations. Obviously, a net rental of $1 an acre for land worth $100 an acre and upwards is an unusually small charge. For the same reason potato land is rented for $3 an acre with a rebate of $1 for clean tillage.

Until recent years the tenants were engaged mainly in grain farming and kept but few livestock except work stock or livestock and poultry necessary for family use. A small amount of pasture was required and this was provided by the company at a small cash rental. Gradually, with the development of mixed farming the demand for pasture has increased. The company was compelled to increase the nominal cash rent formerly charged for pasture. At the

time of the present survey the tenants were considerably disturbed by such an increase, the charge per acre of tame pasture having been raised from $1.50 to $3. This was a 100 per cent increase, but it is obvious that after deducting taxes, cost of sowing, and other charges, the company was getting but a small net return on the value of the land. Recognizing the difficulty of charging for pasture a rental equivalent to what the same land would yield in grain rent, the company was definitely moving in the direction of a stock share contract, a tendency which most of the tenants were resisting to the best of their ability.

OPERATING CAPITAL, LOANS, AND ADVANCES

Under the lease contract the tenant is required to furnish work stock, implements, and other necessary equipment.

When the tenancy system was instituted by the Amenia and Sharon Land Co., only such farmers were selected as were able to supply the working stock and capital for the land they were to farm. In the early years the company succeeded in getting farmers who were able to do this. About 1900 there began a movement of farmers from the Dakotas to the Canadian Provinces, and a little later to Montana. During this period it was difficult for the company to maintain its farms, for the tenants who had a "stake" usually decided to start out for this newer country.

A class of farmers who were financially less responsible had to be taken on by the company. The company had to bear a part of their financial burdens, and in some cases almost all of the financial burden. Moreover, additional land was bought at Mapleton, N. Dak.; and, as good tenants were scarce, the company found it necessary to rent their farms to men who could not pay for their entire equipment. Some were such poor farmers that they were unable to make enough profit to repay. These years proved to be particularly unfortunate for the company.

As conditions changed and agricultural prosperity again set in in the Northwest, a supply of better tenants became available and the company was able to adopt the policy which it has since maintained, that of requiring the tenant to furnish all his own equipment and provide himself with capital through outside sources. An advance is made during the farming season to pay for labor, twine, threshers, and incidental expenses when necessary, and usually a lien is taken against the crops to cover it; but this practice has been discouraged by the company as much as possible.

The tenants are usually charged about 8 per cent on all advances made, and they are secured by chattel mortgages on livestock and equipment. Most of the money is obtained by the company from the Twin Cities at 6 and 7 per cent. The president of the company states that this practice of loaning money to the tenants never paid the company, either financially or by improving the general attitude of tenants toward the company.

Tenants are always urged to obtain necessary loans from some financial institution in Casselton, Fargo, or surrounding territory. At present a bank is being instituted at Amenia, in which some of the members of the compay hold stock. The company is willing at

times to guarantee an account at the bank for a tenant, but it refuses to lend the money directly to the tenant. It finds that the tenant is likely to look to the company in all of his business interests and to become too dependent upon it. He is not likely, therefore, to be a good tenant and to bring the returns to the company that he otherwise would. Moreover, such a policy multiplies the occasions for friction and dissatisfaction.

SPECIAL CONTRIBUTIONS TO EXPENSES OF FARM OPERATION

The company agrees to supply all seed for sowing grain or flax as required under the farming specifications with formaldehyde needed to treat such seed. These provisions enable the company to control the quality of the seed in the interests of large yields and as a source of supply for its seed-grain business.

It is a common provision in small-grain share contracts for the landowner to bear a share, usually half, of the cost of binder twine and of the threshing bill. The Amenia and Sharon Land Co. pays half the cost of the twine employed for shared crops but has allowed a fixed amount per bushel on the basis of elevator net weight for the owner's share of the expense of threshing. The company was forced to require payment on the basis of net weight because of the unscrupulous practices of certain threshermen and tenants. The practice led to the feeling among some tenants that they were compelled to sell their share of the grain to the company.

For some years prior to the survey the rate paid remained substantially unchanged and became insufficient, especially as the payment was allowed only by net weight at the elevator, whereas the tenant was usually compelled to pay on the basis of gross weight at the machine. Recently the company increased its flat rate, and thus removed much of the cause for complaint.

The company pays premiums for fall plowing as a means of inducing good methods of farming. At the time of this survey it was the practice to allow the tenant $1.50 an acre for all land, to be used for sowing shared grain, that was plowed before October 15. An allowance of 75 cents an acre was made for land plowed after that date. The principal object of this policy of encouraging early fall plowing is to give weed seeds a chance to germinate and freeze, thus aiding in maintaining clean fields and a higher yield. It also insures that the tenant will be able to get a full crop sowed at the proper time in the spring. The practice gives the company a great advantage in enforcing the very detailed provisions with respect to plowing contained in its farming specifications, particularly the provisions with regard to order and depth of plowing. (See Appendix.)

As the settlement date between landlord and tenant comes after completion of fall work, it is provided in the contract that the tenant shall be credited with the excess of land plowed at the end of the season over that which had been plowed at the beginning of the season. In case of a deficiency rather than an excess, the tenant's account is debited. Such an arrangement facilitates settlement in case of a departing tenant.

SPECIAL OBLIGATIONS OF TENANTS

In addition to supplying labor and equipment and carrying on the business of farming in accordance with the provisions of the farming specifications, tenants have certain special obligations, which include hauling out and spreading, according to the landlord's directions, all manure made on the farm, hauling all threshed grain to the elevators, and keeping weed seeds from ripening on the farm or on adjacent roads and lanes.

FARMING POLICY AND SYSTEM OF SUPERVISION

In its policy of permanent farming, this company stands in sharp contrast to many of the bonanza farming concerns of the earlier days of the development of the Red River Valley, which skimmed the cream of fertility by exhausting methods of cultivation and then divided up and sold out their holdings to later comers.

In fulfillment of its policy of permanent farming, the Amenia and Sharon Land Co. has developed its field system as far as local economic conditions have made practicable. Up to 1897, the main crop was wheat, varied by summer fallow, with occasionally a field of flax when part of the land could not be prepared and seeded in time for wheat. Oats and barley were raised only as required by the tenant for his own use, and the acreage devoted to these crops was offset by an equal acreage of wheat, which was turned over to the company. About 1898, corn was introduced in place of summer fallow, and in 1899 the farms were first divided into rotation tracts with a regular system of rotation. This was corn, wheat, wheat, flax, and wheat. Whatever acreage of oats was needed by the farmer was put in during the last year of the rotation. In 1913, oats were substituted for flax for the third crop after corn, and barley was substituted for wheat for the first crop after corn, making the regular rotation as follows: Corn, barley, wheat, oats, wheat. The acreage in clover and pasture has increased rapidly since 1914. The company has been working more and more in the direction of a system of mixed farming in which small grain, flax, and corn will be combined with leguminous pastures and the maintenance of considerable numbers of livestock.

Methods of farm operation are worked out in great detail in the farming specifications (see appendix), covering methods of plowing, order of seeding, quantity and quality of seed, treatment of seed, kinds of seeders used, methods of cultivating tilled crops, methods of harvesting and threshing, summer fallowing, putting up hay, and destroying weeds.

The various details of farming policy are covered in such detail in the farming specifications, made a part of the contract, that the company's farming supervisors are mainly employed in seeing that these agreed upon provisions are carried out, and there is little room left for arbitrary dictation. The specifications themselves, however, specifically leave a number of points to the discretion of these supervisory representatives, and an advisory relationship is provided for and encouraged.

Perhaps one of the greatest factors in the success of the company has been the personality of the officials and their attitude toward

their tenants. Forbearance, patience, and courtesy were exercised, even under exasperating circumstances. Tenants with imaginary grievances were at times almost insulting, but they were treated with disconcerting courtesy. With the exception of one tenant, who had attempted to cheat the company, no complaint was made to the investigator which reflected on the treatment of tenants by the officials of the company. Many tenants said that the company was looking out for its own interests but they regarded the methods as strictly honest. The farm manager was not zealous in giving advice and sought to be tactful in making suggestions. The company encouraged the tenants to join organizations for the promotion of better farming methods.

In short, the attitude of the company, although not expressed in specifications, had much to do with the good relations with the tenants.

SETTLEMENT OPTIONS AND MODE OF SETTLEMENT

The tenant contract includes two settlement options. In one of these, corn, hay, and other produce are shared on the same basis as small grain, and the premium for early plowing is made applicable to corn ground. In the other option, the tenant pays cash rent for corn ground and bears all expenses of the corn crop, also agreeing to "skin plow" the corn stubble in the fall. In both options the tenant and landlord agree to divide equally the small grain produced, and in both options the tenant pays cash rental for all tame and wild pasture.

A system of accounts with each tenant is maintained at the headquarters of the company. At time of settlement the following settlement form is filled out, a duplicate of which is given the tenant:

SETTLEMENT SHEET USED BY LANDLORDS IN YEARLY ADJUSTMENT OF ACCOUNTS WITH TENANTS

[With duplicated portions left out and with other adaptations. Enter engine plowing in red figures]

Crop	Plowed in spring				Plowed in fall				Unplowed in fall
	Total acres	Regular depth	Skin plowing	Disking, etc.	Before Oct. 1	After Oct. 1	Skin plowing	Disking, etc.	
Wheat									
Oats									
Barley									
Rye									
Flax									
Other grains									
Total grain crops									
Corn, divided									
Corn, rented									
Grass									
Pasture									
Summer fallow									
Total land cultivated									

STATEMENT OF GRAIN RAISED

	Wheat	Oats	Barley	Flax	Other grain
Where delivered					
Retained by tenant					
Total grain raised					
Our share					
Tenant's share					
Total					
Retained by tenant					
Sold by tenant					
Date ——— Pur. No					
Date ——— Pur. No					
Date ——— Pur. No					
Storage ticket to tenant					
Sold by us (credit tenant)					
Tenant's share					

Tenant _____ Year ____
Farm _____ Section ____ Township ____ Range ____

RESULTS OF POLICIES FOLLOWED

LANDLORD'S PROFITS

The wisdom shown by the Amenia and Sharon Land Co. in retaining the ownership of its holdings and the results achieved by continuous operation, may be measured by annual returns earned and by the increment in value of the real estate. This can best be traced by employing averages for 16 tenant farms for which continuous records are available from 1896 to 1920. The average estimated valuation of real estate per acre and the average net return earned per acre by years from 1896 to 1920 inclusive, are shown in Table 1.[3]

TABLE 1.—*Average estimated valuation of real estate per acre and the average net return earned per acre by years from 1896 to 1920, inclusive*

Year	Estimated valuation of real estate per acre	Average net return to landlord per acre	Year	Estimated valuation of real estate per acre	Average net return to landlord per acre
1896	$18.50	$0.84	1910	$53.00	−$0.13
1897	18.00	1.07	1911	55.00	1.94
1898	21.50	.67	1912	65.00	1.60
1899	22.00	.85	1913	69.00	1.43
1900	22.50	−.51	1914	67.50	1.05
1901	22.00	.96	1915	82.50	2.51
1902	25.00	2.02	1916	85.00	.37
1903	25.00	1.83	1917	90.00	6.38
1904	25.00	2.33	1918	100.00	6.31
1905	30.00	1.95	1919	110.00	.58
1906	32.50	1.89	1920	110.00	1.80
1907	35.00	2.10			
1908	37.50	3.09	Average	50.46	1.84
1909	40.00	3.02			

[3] The figures on landlord's net returns are taken from a preliminary report, Farm Tenants and Owners on a Corporate Estate, by Walter H. Baumgartel and Charles L. Stewart, Bureau of Agricultural Economics, Washington, 1924. The other figures are from "Some Economic Aspects of Farm Ownership in Three Decades," by Charles L. Stewart, U. S. Dept. of Agr. Bul. 1322. The figures on net returns represent the gross rent received by the company from these farms less all expenses incurred by the company for the operation and maintenance of the farms, including cost of supervision and real estate taxes.

The 16 farms yielded the company an average net return of $1.84 per acre over the period of 25 years. If this is expressed as a ratio of the average estimated valuations of the real estate for each year of the period, the percentage of return on the current value of the investment was a little over 3.8 per cent; but if the annual net return is figured on the basis of the estimated value of the real estate in 1896, the rate of return is a little over 10 per cent. Furthermore, there was a large increment in the value of real estate. Omitting that part of the valuation represented by the buildings and other surface improvements, there was a net increase of $86.58 per acre, or an average of $3.46 per acre each year, or 18.7 per cent of the estimated valuation of the real estate in 1896. The combined increment and net return not excluding taxes averaged $5.56 per acre each year, or 30.1 per cent on the original valuation in 1896.

Certain allowances should be made by way of modifying these seemingly striking showings. In the first place, the period 1896–1920 was on the whole an unusually favorable period from the standpoint of both net returns and increase in the valuation of farm real estate. The continuous records are available only for the period since 1896; but it must be recalled that the company had owned and operated these holdings since 1875, although the tenant policy was not adopted until 1892. The years preceding 1896 were marked by a much less favorable showing, at least as to increase in valuation, than was the subsequent period. Thus, while the estimated average valuation for the 16 farms was $18.50 per acre in 1896, it was $10 per acre according to the census valuation of 1880. Had the increment in value been spread over the entire period from 1880 to 1920, a smaller average return per year would result.

The increment of valuation is realized as such only by sale of the property. As a result of the depression in agriculture, the average valuation of farm real estate in this section probably has not increased since 1920, if it has not actually decreased. Moreover, there is little reason to anticipate so large a rate of increase for a number of years to come. Again, it is well to recognize that a part of this increase in valuation, as well as the tendency toward increasing net returns during the period, reflects depreciation in the value of the dollar. During the period, average wholesale prices of all classes of commodities increased nearly 240 per cent.

RECORD OF CROP YIELDS

Throughout the period from 1896 to 1920 wheat was the principal crop on these 16 tenant farms. The average yield of wheat per acre for each year from 1896 to 1920, as compared with the estimated average[4] for the county as a whole, is given in Table 2. The policy of the company in promoting careful selection of seed, extermination of weeds, and other good methods of cultivation is reflected in the fact that the average yield for a quarter of a century was about 2 bushels per acre, or nearly 17 per cent higher than for the county as a whole.

[4] Estimates for the county are those of the Crop Reporting Service of the U. S. Department of Agriculture.

Granting the significance of this comparison of yields, which is doubtful, the figures may indicate an essential difference in the productivity of the land rather than a result of better farming. In fact for the first 10 years of record the average yield of the 16 farms was 2.5 bushels above that of the county whereas for the last 10 years it was only 1 bushel above.

TABLE 2.—*Average yield of wheat per acre for each year from 1896 to 1920, as compared with the estimated average*

Year	16 farms	County estimates	Year	16 farms	County estimates
	Bushels	*Bushels*		*Bushels*	*Bushels*
1896	11.8	11.8	1910	9.0	5.0
1897	12.5	10.3	1911	11.2	8.0
1898	15.1	14.4	1912	18.6	18.0
1899	17.7	12.8	1913	14.3	10.5
1900	5.4	4.9	1914	8.7	11.2
1901	14.7	13.1	1915	15.2	18.3
1902	19.2	15.9	1916	1.4	5.5
1903	18.0	12.7	1917	14.5	8.0
1904	13.8	11.8	1918	18.2	13.6
1905	15.5	14.0	1919	4.9	6.9
1906	16.0	13.0	1920	11.1	9.0
1907	13.0	10.0			
1908	15.6	11.6	Average	13.3	11.4
1909	15.9	14.3			

FINANCIAL SUCCESS OF TENANTS

So far as the farms operated are concerned, the tenants did not participate in the large accounting gain due to increase in the valuation of farm real estate. Reports on the net gain or loss since starting on the company's holdings were obtained for 32 of the tenants on the estate. Four of these had suffered decreases in net worth ranging from $1,100 to $3,300. The other 28 made gains ranging from $350 to nearly $15,000. Of these, 4 had gains of $1,000 or less, 9 had gains of more than $1,000 but less than $3,001, 7 had made gains of more than $3,001 but less than $5,001, and 8 had made gains ranging from $5,500 to $14,950. The average net gain of the 32 tenants was $3,648. The average period of occupancy was about 7 years, ranging from 1 to 23 years.

In addition to the financial record of tenants on the farms at the time of this survey, similar information was obtained for tenants who had left these farms. Of a total of 44 cases reporting, 31 showed a net gain for the period of occupancy, 4 suffered a loss, and 9 were reported as having "broken even."

There was a strong tendency for tenants leaving the company's farms to graduate into ownership. Reports obtained for 47 tenants who had left these farms showed that 42 were still farming,[5] 32 of whom had become owners or owners additional. Of the 32 who had acquired the ownership of farm land, only 8 had been owners of farm land at the time they were tenants of the Amenia and Sharon Land Co.

[5] Slight discrepancies in total number of tenants mentioned in this and the preceding paragraph are due to the failure of a few tenants to reply to all of the questions.

STABILITY OF OCCUPANCY OF TENANTS

At the time this survey was made, 13 of 63 tenants then occupying the company's farms had been on their holdings 10 years or more, 34 for 5 years or more, and 29 for less than 5 years. Only 11 tenants had held their farms less than 2 years.

Reports were obtained for 46 tenants who had left the company's land. Of these, 9 had remained with the company 10 years or more, 25 for 5 years or more. Of the remainder, only 7 held their farms less than 2 years. The average period of occupancy for those who had left the company's service was 6.1 years.

SUBSEQUENT CHANGES IN ORGANIZATION

Since this study was made important changes have been effected in the organization of the business. The corporate form is in process of being dissolved, and the property is divided among the principle shareholders. A number of the holdings are still large and would be considered large estates in most parts of the country. According to the former president and general manager, the reasons for this division are substantially as follows:

There were certain advantages in the corporate form of organization, but there were also certain disadvantages, especially the large number of reports to comply with various legislative enactments. The organization was somewhat unwieldy, because of the difficulty of making standard regulations and agreements fit all the varying circumstances of so large a number of tenants. The smaller size of holdings makes possible a more intimate contact of landlord and tenant. To quote the statement: "From my own experience I find that my relations with the 8 or 10 tenants who farm the land that has been allotted to me have been very much more satisfactory than those existing between the same tenants and the land company previous to the change."

The principal reason for the subdivision of the holdings is the increasing diversification of agriculture in the region. As long as only one general system of farming was to be considered, there was room for but little difference of inclination among the several holders as to the system to be employed. Various alternative systems are now possible, and the subdivision of the estate enables the different owners to follow their various predilections. This they are proceeding to do. One of the landlords is giving special emphasis to production of pure seed and is devoting a larger proportionate acreage to sweet clover and alfalfa. Another, who is an experienced cattleman, is specializing in shorthorn cattle, and his tenants are working into this under the landlord's encouragement and supervision. Still another is giving special attention to swine and dairy cattle. The largest holder still continues the policy of grain farming, varied somewhat by occasional stock-share leasing for particular tenants who have the capital, ability, and inclination to carry on mixed farming.

Considerable cooperation still exists between the various landlords among whom the original holding has been divided, as is natural

considering the family relationship and the long-established community of interest. "We are all interested in each other's experiences and frequently compare notes, and I assume that if one makes a success in one particular line, the others will likely get the benefit of his experience in their business later on."

The increased diversification of agriculture and certain personal circumstances and inclinations have brought the original organization to an end, but its long experience affords important suggestions for the management of large holdings of farm land in other parts of the country, particularly in regions where the system of farming is characterized mainly by grain production.

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APPENDIX

FARM CONTRACT OF THE AMENIA AND SHARON LAND CO.[6]

FARM CONTRACT

THIS AGREEMENT, Made in duplicate this_____day of_____A. D. 19____, by and between_____hereinafter called the farmer, and The Amenia and Sharon Land Company, a North Dakota corporation, hereinafter called the owner:

WITNESSETH, That the parties hereto enter into this contract for the raising and production of grain, farm crops, and produce, beginning on the_____ day of_____A. D. 19____, and continuing until terminated as hereinafter provided, under the following conditions and obligations which are hereby jointly or severally assumed and agreed to by the parties hereto, viz:

THE OWNER AGREES TO THE FOLLOWING:

To contribute the use of the following described premises and real estate, hereinafter called the farm situate in the county of Cass and State of North Dakota, viz:_____

_____

excepting and reserving herefrom all highway, school, church or railroad property on said premises.

To furnish the farm buildings, now situate on said premises, and to make such general repairs to the buildings as may be necessary; also to supply the requisite fence material.

To pay the taxes on said real estate, and for fire insurance on the buildings.

To measure and lay out the farm, to skillfully plan the crop rotations, to compile farming specifications hereinafter referred to, and so far as practicable to furnish expert advice and counsel regarding the farming operations.

To furnish in each season during the continuance of this contract the seed which may be necessary for the seeding of the farm according to the farming specifications then in force, and the formaldehyde needed to properly treat such seed.

To pay the farmer such sums for threshing, plowing, etc., as may be due him under the provisions of the farming specifications in effect when such work is done.

At the times and under the conditions named herein to release to the farmer such share of the crops and produce of said farm as is hereinafter provided.

THE FARMER AGREES TO THE FOLLOWING:

To occupy and well and faithfully till and farm the premises above described during the continuance of this agreement, in a good and farmer-like manner, and according to the farming specifications hereto annexed and made part hereof, or such specifications as may hereafter be adopted in lieu of same.

To furnish and supply the terms, tools, twine, farm implements and machinery, and to provide, maintain and pay the labor and hired help, necessary to properly plow, operate and carry on the farm, and to sow, harvest, thresh and market the crops and produce grown thereon.

To deliver to the elevator named in the farming specifications the entire crop grown on the farm except as otherwise provided in said specifications.

To commit no waste or damage on or about the farm, and to suffer none to be done.

To protect and care for the buildings, fences, trees and ditches on the farm, and to maintain and repair same to the extent required in the farming specifications.

To pay the owner such sums for cash rentals, plowing shortages, etc., as may be due under the farming specifications then in effect.

To sublet neither the farm nor any part thereof without the written consent of the owner.

If he farms other land, to give precedence as far as practicable to the work on this farm over work of the same nature on such other land.

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[6] Material in this appendix is reprinted, to make it more readily available, from Bulletin 171 of the North Dakota Experiment Station: Cash and Share Renting of Farms, by Alva H. Benton.

To yield and surrender possession of the farm to the owner at the termination of this agreement as herein provided.

It Is Mutually Agreed by and Between the Parties Hereto:

That this agreement may be terminated on the first day of March in any year at the option of either the farmer or the owner, provided that written notice of the intention to so terminate this contract shall be served by the party exercising such option on the other party hereto on or before the 31st day of December next preceding the date of such termination.

That should the farmer neglect, fail or be unable to commence or carry on the work of seeding at the proper time in any year, the owner may at its option declare this contract terminated, whereupon it shall be so terminated forthwith, and the owner may enter upon and repossess the farm without other or further liability or obligation to the farmer.

That the farming specifications hereto annexed shall form a part of this contract and shall be binding upon both parties hereto. Such specifications may be amended or changed by the owner to take effect at the beginning of any farming season, but written notice of such changes, and a copy thereof, shall be given to the farmer on or before December 15th preceding the time for the taking effect of such change, whereupon such new or amended specifications shall be binding upon both parties hereto on the March 1st succeeding, unless this contract shall meantime have been terminated.

That all the grain, hay, corn and produce raised and secured on the farm in each season during the continuance of this contract shall, except as otherwise provided in the farming specifications, be equally divided both in quantity and quality, between the farmer and the owner; provided, nevertheless, that the owner shall have a lien, which shall be in force without further act on the part of either party, upon the farmer's share of all such crops, divided or undivided, to cover all indebtedness of the farmer to the owner, and all advances made by the owner to the farmer, and as security for the fulfillment of each and all of the obligations of the farmer under this contract; and until such indebtedness is paid and all of such agreements and obligations of the farmer for the current season are performed, no part of the said grain, crops, or produce shall be sold, mortgaged, or otherwise encumbered or disposed of by the farmer without the written consent of the owner.

That this contract shall not be construed to create a partnership of any liability on the part of either the owner or the farmer to any third party for any act or failure to act or for any indebtedness of the other party hereto, except as herein expressly stated.

That the owner shall at all times have the right to enter upon said premises to inspect the crops, or the work being done, or to examine or repair the buildings.

That if the farmer shall neglect or fail to perform in the proper season any part of the farm work required by this contract or the farming specifications, the owner shall have the right to hire such work done at the expense of the farmer; or the owner may at its option do such work and charge the farmer for the same at the current rates, and the cost or reasonable value thereof shall be deducted from the share of the crop belonging to the farmer.

That all the conditions and obligations hereof shall extend to and be obligatory upon the heirs, executors, administrators and assigns of the farmer, and upon the successors and assigns of the owner.

In Testimony Whereof, the farmer has hereunto set his hand, and the owner has caused these presents to be executed in its corporate name by its proper officers and its corporate seal affixed, the day and year first above written.

_____

_____

Witnesses: The Amenia and Sharon Land Company,

_____ By _____

Its President.

_____ Attest _____

Its Secretary.

The receipt of a full and complete copy of this agreement and of the farming specifications for the year_____ is hereby acknowledged by the farmer.

_____

_____

FARMING SPECIFICATIONS, THE AMENIA AND SHARON LAND CO.

1. These specifications are not intended to describe in full all of the work required to farm the land "in a good and farmer-like manner." Both the farmer and the owner shall do all things required to carry out the spirit and intent of the agreements made by each in the contract, even though such things are not specifically stated herein.

2. The object of this enterprise is to obtain the greatest possible production from the farm, such being to the advantage of both the farmer and the owner. It is recognized that such production may be obtained only by the use of the most effective farming methods, including a proper rotation of the crops, use of a high quality of seed of the most desirable varieties, the keeping of the land in a high state of fertility and free from noxious weeds, and doing the farm work at the proper time and in the right way. The farmer and the owner shall therefore cooperate in using such methods and securing such results.

3. In case the farmer is unable to do any part of the work in the manner or at the time required by the specifications, he shall notify the Farm Manager or Superintendent, and ask for instructions.

4. Specifications which by their terms are advisory only shall nevertheless be followed by the farmer unless good reason exists for doing otherwise.

5. These specifications are intended to reflect the best and most efficient farming practices, and it is the owner's intention to make any changes which will improve them in that direction. Suggestions and criticism by the farmer to this end will be welcomed and given proper consideration.

6. It is the wish of the owner that work on this farm shall be done during the six days allotted to labor, and that the laws of the State in regard to Sunday work be respected.

Seeding

7. Seed shall be sowed or planted at the following rates:

Wheat	75 pounds per acre	(1¼ bushels).
Oats	96 pounds per acre	(3 bushels).
Barley	72 pounds per acre	(1½ bushels).
Flax	28 pounds per acre	(½ bushel).
Rye	84 pounds per acre	(1½ bushels).
Corn	9 pounds per acre.	
Grass Seed	10 pounds per acre	(6 quarts).

The farmer is to carefully set his drills or planters to seed at the above rates as closely as possible. This may be varied somewhat according to the condition of the soil, putting less seed on rich and heavy land, and more on old land or light soil, but making it average as above.

8. All seed grain is to be treated with formaldehyde solution before seeding, to destroy smut spores and other plant diseases. Such treatment shall be according to the direction of the North Dakota Experiment Station. The seed shall be treated not more than two days before it is used, so that there will be no damage from heating, sprouting or moulding.

9. Care must be taken by the farmer to prevent loss or waste of seed, or mixing same with uncleaned grain or with seed of a different variety. Drills are to be carefully cleaned when changing from one variety of grain to another. All seed which is not required for planting on the farm remains the property of the owner, and the farmer is to return all of such surplus seed to the owner as soon as seeding is completed.

10. Under ordinary circumstances crops should be seeded in the following order: First, wheat; second, oats; third, barley; fourth, corn; fifth, flax.

This order may be varied only when soil conditions make it necessary.

11. Early seeding of grass and clover seed is desirable, and lands to be so seeded are to be given the preference when possible. Such seed should be broadcast by a grass seeder attachment, so as to secure a uniform distribution on the ground.

12. Under usual conditions land should be disked and then dragged at least twice before seeding, so as to loosen the surface, kill weeds which have started, break up the lumps, and compact the plowed soil against the subsoil to bring up the moisture. On lighter soils this may be accomplished without disking.

No effort is to be spared to get a seed bed of good depth, compact below and fine on the surface. This is especially to be observed on land where grass seed, clover, flax or other small seeds are to be planted.

13. Double-disk press drills get the best results, and are to be used when practicable. When these are used the land is not to be dragged after seeding, but is to remain as the drills leave it. If other drills are used, the land may be dragged after seeding to good advantage. Care is to be taken not to seed too deep, but at the same time to have the seed evenly and properly covered.

Corn

14. Land to be planted to corn is to be plowed to the full depth, and shall be thoroughly dragged and worked down immediately after plowing, so that it will not dry out and bake. The corn shall be planted as soon as possible after this work is done, in order to forestall the weeds.

15. Corn should be planted before June 1st, and is to be check-rowed with rows 3 ft. 6 in. apart, dropping three or four kernels to the hill. Use more seed if corn is deficient in germination. The planter wire should be kept stretched evenly so that the rows will be straight both ways, otherwise cross cultivation will injure the corn.

16. Where the land is likely to be weedy it is not to be dragged after the planter, but shall be blind cultivated between the planter marks to destroy wild oats and other weeds. Such blind cultivating is to be done as soon after planting as possible when the weeds and wild oats begin to show, and should usually be followed by cross dragging to level down the rows. When the ground will permit, this dragging should be repeated and continued until the corn is large enough to cultivate.

17. The blind cultivating, and the first one or two regular cultivations, should be deep, keeping close to the corn rows to destroy as far as possible the wild oats and other weeds which are starting around the hills.

18. As the corn grows and throws out roots, care should be taken to cultivate the surface only, as these roots run near the surface, and if they are cut off the plant will be seriously injured and the crop much reduced.

19. Corn should be cultivated at least twice each way, and surface cultivation may be continued with benefit to the crop until the corn is too large. Weeds should not be allowed to get a start, as rains may interrupt the cultivation, and give the weeds such a chance that they can not afterward be cleared out.

20. Wild oats, king heads, etc., which remain in the hills in spite of cultivation should be pulled by hand before the seed is formed. Clean corn fields will in time make a clean farm.

21. Corn is to be cut as soon as it is mature, and when it shows the kernels well glazed and beginning to dent. If a killing frost occurs, the corn is to be cut as soon thereafter as possible.

22. To facilitate division, corn which is to be divided is to be shocked in straight rows across the field, with the same number of corn rows included in each shock row.

Weeds

23. All weeds growing around buildings, along fence lines, or in yards, coulies, pastures, wet and waste places, shall be kept cut by the farmer.

24. The farmer shall keep the weeds cut along the roads and highways running across or adjoining any part of the farm, so that (*a*) no noxious weeds shall go to seed along such roads, (*b*) no weeds or grass shall remain to cause snow to drift on the roads during the winter.

25. The farmer shall be entitled to the whole of any allowance which may be made him by a township for cutting weeds on the highway, unless such township makes a special tax or assessment on the land to cover such weed cutting, in which case the amount of such tax shall go to the owner and the balance of the allowance, if any, shall go to the farmer.

26. The farmer shall pull or otherwise destroy all mustard and sow thistle while the same are in blossom and before seed has formed.

27. Canada thistles are to be cut or pulled and prevented from going to seed. The owner will cooperate in destroying Canada thistles, but it is incumbent on the farmer to report all patches which are found on the farm and to assist as much as possible in their eradication.

Summer-Fallow—Rye

28. Summer-fallowing of land is not to be a part of the regular plan of farming covered by these specifications, and no land shall be summer-fallowed without the specific direction of the owner.

29. Summer-fallowing shall be plowed twice; first, skin plowing as soon as seeding has been finished in the spring; second, deep plowing, done between July 1st and July 15th, and in no event delayed so as to allow wild oats to produce seed.

30. Winter rye is to be seeded on summer-fallowed land unless the owner directs otherwise, and shall be seeded on other land if required by the owner. It should be seeded between August 10th and September 1st.

Hay and Clover

31. Clover, alfalfa, and tame and wild grass is to be cut, cured, and stacked at the proper season. Clover and clover mixtures are to be cut as soon as the clover is in full bloom. Timothy is to be cut as soon as it is past bloom and the seed commences to form. Alfalfa should be cut when the new shoots begin to start at the roots, which is usually about the time it commences to blossom.

32. No more grass or clover should be cut in a day than can easily be raked and cared for the day following. Clover and alfalfa when left too long on the ground are subject to loss of foliage in handling if the weather is dry, and any kind of hay is seriously damaged by rain.

33. Stacks shall be carefully built and properly topped out, raked down, and anchored. The farmer is to see that stacks are protected from damage by fire or livestock.

Manure

34. All manure made or produced on the farm shall be hauled and properly spread on the land by the farmer and shall be applied to such land as may be directed by the owner. No such manure shall be burned or destroyed or spread on land not owned by the owner.

35. It is the intention to apply manure to unfertilized land, or that which has not been manured for some time, or that which is out of condition, rather than to spread it on land which has been more recently manured.

36. Manure should not be spread on a permanent pasture.

37. Yards should be cleaned out at least once a year.

38. The acreage covered by manure should be indicated on the farm plat for each year, so that a permanent record may be kept.

Harvesting

39. All grain or flax is to be harvested, bound, and shocked at the proper season, as follows: Barley is to be cut as soon as it is in the stiff dough, so as to avoid loss by shelling and prevent wild oats from scattering on the land; oats, Blue Stem wheat, and Velvet Chaff wheat are to be cut on the green side to prevent shelling; Marquis wheat, rye, and flax are to be cut as soon as they are fully ripe.

40. Both grain and flax shall be properly shocked as soon as possible after cutting, in order that it may properly dry and to prevent damage by the elements. If shocks are blown over or bundles are scattered they shall be reshocked without delay.

Threshing

41. Grain is to be threshed only when it is dry and in proper condition, so as to prevent loss in separating the grain from the straw and in lowering of grade at the elevator.

42. Bundle racks shall have tight bottoms, and all material collecting on same shall be saved and run through the threshing machine.

43. A large canvas, or other arrangement equally effective for the purpose, shall be used under and around the machine to prevent the scattering and waste of grain, and a thorough clean-up shall be made at each setting.

44. Threshing shall not be rushed beyond the separating capacity of the machine. Bundles are to be fed in evenly and carefully and with the heads toward the cylinder. The machine is to be so adjusted and operated that there will be a complete separation of grain from the straw and chaff without appreciable waste or loss.

45. Shock rows are to be raked when the value of the grain so saved will equal or exceed the cost of the work.

46. Grain tanks must be made tight, and shall be carefully inspected and watched to see that no leakage occurs, and shall not be filled so full that the grain will spill or blow over the top.

47. Threshed grain shall not be left exposed to damage by the elements.

48. It shall be the duty of the farmer to see that these specifications are observed during the progress of the threshing, and that no unpreventable loss, waste, or damage occurs.

49. The farmer shall haul as soon as threshed all of the grain and seed raised and produced on the farm to the _____ elevator at _____, excepting that at the option of the farmer the oats and barley may be divided at the machine, and such a part of his share of said oats and barley as he may need for feed may be retained by him under the folowing conditions: Tanks are to be filled uniformly and shall be alternated between the elevator and the granary, each tank being sent to the elevator first. Tanks not entirely filled must be sent to the elevator. Unless these conditions are fully accepted and carried out by the farmer no grain shall be divided at the machine, but the entire crop shall be delivered at the elevator named above.

50. The farmer shall notify the owner at least twenty-four hours before threshing is to be started or resumed, so that a checker may be provided.

51. The checker will look after loading the tanks and shoveling back the grain in same. The owner is to employ and pay the checker, and the farmer is to furnish him suitable board and lodging.

52. As soon as scale tickets are returned from the elevator each shall be submitted to the checker for entry on his report. When the threshing is completed the scale tickets shall be checked up with the owner, so that the grain may be correctly totaled and divided.

Plowing

53. All grain stubble, grass, clover, or pasture land which has been left unplowed in the fall and is to be put into small grain, flax, corn, or potatoes the following season shall be plowed in the spring before cropping.

54. Corn stubble and potato land which has been left unplowed in the fall shall also be plowed in the spring before cropping, except that in case such land is clean and free from the seeds of noxious weeds, it may, after consultation with and consent by the owner, be double-disked instead of being plowed, by lapping the disk half its width to avoid ridging or by the use of a duplex disk.

55. The farmer shall plow in the fall all the land which is intended for cropping to wheat and oats during the following year, and after such land has been plowed he shall plow as much as the season will permit of the other land intended for cropping the succeeding season, following the order stated below.

56. Unless prevented by the condition of the land, fall plowing shall be done in the following order:

1. Land for wheat the following year, starting on barley stubble, if any, in order to turn under and sprout volunteer barley.
2. Land for oats the following year.
3. Corn stubble to be put to wheat.
4. Stubble land for corn the following year.
5. Clover, pasture or meadow intended for corn.
6. Corn stubble, intended for barley.
7. Pasture or meadow, intended for flax.

57. All plowing shall be done to the minimum depth stated below, with furrows well cut and stubble cleanly turned under, viz:

Stubble plowing for small grain	5½	inches.
Stubble plowing for corn or potatoes	6	inches.
Sod plowing for flax	5	inches.
Sod plowing for corn or potatoes	6	inches.
Summer fallow, first plowing	2 to 3	inches.
Summer fallow, second plowing	6	inches.
Skin plowing, to start weeds	2 to 3	inches.
Skin plowing of corn stubble	2 to 3	inches.

58. The plows shall be turned on headlands at the ends of the fields, to avoid crossing ditches and injuring roads.

59. In plowing, the farmer shall throw the furrows away from all ditches, and shall plow down to the bottom of all road ditches, but not beyond the center of the ditch.

Hail Insurance

60. The State Hail Insurance law provides for the insuring of crops from damage by hail, and such insurance is in force on all land in the State which is not withdrawn before June 15th, the cost of such insurance being collected with the taxes. Unless the farmer authorizes the withdrawal of the farm from the operation of the law before June 1st in each year, it will be understood that he wishes to insure the crop, and the whole of said insurance will apply to his share of the crops, and the cost of same will be charged to him. Any part of the crops may be withdrawn by giving notice as provided above.

Repairs and General Care

61. The farmer shall protect and care for the buildings and equipment on the farm, and shall keep both buildings and farmstead in a neat and tidy condition.

62. Breakage of window glass (except from hail), loss or damage to screens or storm sash, and similar repairs and replacements, shall be at the expense of the farmer.

63. The owner will furnish a reasonable amount of paint, wall paper, etc., for the interior of the dwelling, same to be neatly and carefully applied by the farmer, or at his expense.

64. The farmer shall construct, move or take down fences as may be necessary, and shall keep all fences and gates in good repair, maintaining them in such a condition that stock shall not escape. The owner shall furnish the necessary fence material, the hauling of the same to be done by the farmer.

65. Fences around temporary pastures shall be built with three barbed wires, on posts set twenty feet apart, with corners thoroughly braced and stayed.

66. Fence posts not in use shall be carefully piled and preserved and wire is to be properly rolled or coiled. Any surplus fence material shall be returned or held on the farm as the owner may direct.

67. The farmer shall not allow any livestock, either his own or that of others, to pasture or run on growing crops, or on stubble where grass or clover is seeded, or in cornfields where the owner's share of corn has not been removed, or upon meadows or hay land. Poultry belonging to the owner shall not be permitted to damage crops.

68. The farmer shall keep the ditches on the farm open and clear of obstructions, and shall do such ordinary drainage as may be necessary to prevent damage to the crops.

69. Shade trees, shelter belts and shrubbery on the farm shall be protected and properly cared for by the farmer. Natural timber and tree claims if any shall be protected, and no trees shall be cut or removed without the permission of the owner.

Division of Crops—Cash Rentals

Option A

70. The farmer shall have the free use of a garden of sufficient size to properly supply his family table.

71. The farmer shall have the use of all of the pasture on the farm, and as rental therefor shall make a cash payment at the rate hereinafter stated, and shall build, repair or remove such fences as may be necessary, and shall plow the land when the use of same as pasture is to be discontinued.

72. With the above exceptions, all crops or produce sown, grown or raised on the farm shall be equally divided, both as to quantity and quality, between the farmer and the owner under the provisions of the contract.

ANNUAL SETTLEMENT

Option A

73. After the completion of the fall work on the farm in each season during the life of this contract, an annual settlement shall be made between the owner and the farmer. Settlements will be made as nearly as possible in the order in which applications are made therefor by the farmers after their fall work has been completed.

74. The farmer shall be credited in such settlement with the following allowances:

75. *Threshing.*—For threshing the owner's share of grain and flax seed, the farmer shall have credit at the following rates per bushel, all figured at elevator net weight:

Wheat_____ cents per bushel
Oats_____ cents per bushel
Barley_____ cents per bushel
Rye_____ cents per bushel
Flax_____ cents per bushel

76. The farmer shall be charged in said settlement with the following items:

77. *Cash rentals*:

For all tame pasture on the farm_____$_____ per acre
For wild pasture_____$_____
For_____

78. *Hail insurance.*—Unless the land has been withdrawn from the operation of the State hail insurance law, as provided in paragraph 60, the farmer shall be charged with the cost of such insurance.

79. *Weed tax.*—The farmer shall be charged with any amount which may have been legally levied or assessed against the farm for or on account of the cutting or destruction of weeds, either on said farm or on highways across or adjoining the same.

80. *Binder twine.*—The owner shall supply one-half of the binder twine actually and necessarily used in harvesting those crops which are to be shared equally between the farmer and the owner under the provisions of this contract; or instead of furnishing such share the owner may at his option pay one-half of the cost of the twine so used, but no purchase of twine for the owner's account shall be made by the farmer without the owner's express approval.

81. *Adjustment of plowing.*—At each annual settlement an adjustment shall be made between the farmer and the owner based upon the amount of land left plowed on the farm at the close of the season as compared with the amount left plowed at the close of the preceding season. When the number of acres left plowed at the close of the season exceeds the number of acres left plowed at the close of the preceding season, the owner shall credit the farmer for such number of acres of excess plowing at the rate of $_____ per acre; but when the number of acres left plowed at the close of the season is less than the number of acres left plowed at the close of the preceding season the owner shall charge the farmer for the number of acres of such shortage at the same rate per acre. It is agreed that there is _____ acres plowed on said farm at the date of this contract.

DIVISION OF CROPS—CASH RENTALS

Option B

70. The farmer shall have the free use of a garden of sufficient size to properly supply his family table.

71. The farmer shall have the use of all of the pasture on the farm, and as rental thereof shall make a cash payment at the rate hereinafter stated, and shall build, repair, or remove such fences as may be necessary, and shall plow the land when the use of same as a pasture is to be discontinued.

71B. The farmer shall have the entire crop of corn grown on the farm, under the following conditions and terms of rental:

(*a*) He shall plow the land in the spring without charge, or if the same has been plowed in the fall he shall be charged with the cost of such plowing.

(*b*) He shall furnish the seed corn.

(*c*) He shall keep the corn land clean and free from wild oats, king heads, and other noxious weeds, so that none go to seed on said corn land.

(*d*) He shall skin-plow the corn stubble in the fall without cost to the owner, leaving same clean and in proper condition for cropping to grain the following season.

(*e*) He shall pay to the owner a cash rental of $_____ per acre for all of said corn land; provided that a rebate of $_____ per acre shall be deducted from such cash rental for all or any part of such corn land which may on inspection by the owner appear to have been kept clean and free from noxious weeds as provided in paragraph C.

72. With the above exceptions, all crops or produce sown, grown, or raised on the farm shall be equally divided, both as to quantity and quality, between the farmer and the owner under the provisions of the contract.

ANNUAL SETTLEMENT

Option B

73. After the completion of the fall work on the farm in each season during the life of this contract, an annual settlement shall be made between the owner and the farmer. Settlements will be made as nearly as possible in the order in which applications are made therefor by the farmers, after their fall work has been completed.

74. The farmer shall be credited in such settlement with the following allowances:

75. *Threshing.*—For threshing the owner's share of grain and flaxseed, the farmer shall have credit at the following rates per bushel, all figured at elevator net weight:

Wheat_____cents per bushel
Oats_____cents per bushel
Barley_____cents per bushel
Rye_____cents per bushel
Flax_____cents per bushel

76. The farmer shall be charged in said settlement with the following items:

77. *Cash rentals:*

For all corn and potato land_____ $_____ per acre.
(Less rebate, if any, as provided in paragraph 71B, clause E.)
For all tame pasture on the farm_____ $_____ per acre.
For wild pasture_____ $_____
For_____ $_____

78. *Hail insurance.*—Unless the land has been withdrawn from the operation of the State Hail Insurance law, as provided in Paragraph 60, the farmer shall be charged with the cost of such insurance.

79. *Weed tax.*—The farmer shall be charged with any amount which may have been legally levied or assessed against the farm for or on account of the cutting or destruction of weeds, either on said farm or on highways across or adjoining the same.

80. *Binder twine.*—The owner shall supply one-half of the binder twine actually and necessarily used in harvesting those crops which are to be shared equally between the farmer and the owner under the provisions of this contract; or instead of furnishing such share the owner may at his option pay one-half of the cost of the twine so used, but no purchase of twine for the owner's account shall be made by the farmer without the owner's express approval.

81. *Adjustment of plowing.*—At each annual settlement an adjustment shall be made between the farmer and the owner based upon the amount of land left plowed on the farm at the close of the season as compared with the amount left plowed at the close of the preceding season. When the number of acres left plowed at the close of the season exceeds the number of acres left plowed at the close of the preceding season, the owner shall credit the farmer for such number of acres of excess plowing at the rate of $_____ per acre; but when the number of acres left plowed at the close of the season is less than the number of acres left plowed at the close of the preceding season the owner shall charge the farmer for the number of acres of such shortage at the same rate per acre. It is agreed that there is _____ acres plowed on said farm at the date of this contract.

ORGANIZATION OF THE UNITED STATES DEPARTMENT OF AGRICULTURE

April 7, 1925

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